

AMENDMENTS TO THE CLAIMS

1. (Currently amended) An examination apparatus for use in selecting a patient for whom an oxygen therapy is effective among patients having a sleep respiratory disturbance, the apparatus ~~having comprising:~~

a biological information monitoring system, which has a unit for measuring and recording an airflow information about presence/absence or magnitude of respiratory airflow of the subject patient, and a unit for measuring and recording an electrocardiogram wave form of the subject patient having an electrode part which can be stuck on the skin of the subject patient, wherein the monitoring system is constituted such that the subject patient can move in the state having the monitoring attached on the body of the subject patient;

an analysis unit for analyzing the enhanced state of sympathetic nerves based on the measured electrocardiogram wave form; and

an output part for displaying or printing both of: (A) a transition of respiratory airflow; and (B) a transition of enhanced state of sympathetic nerves, of the subject patient during sleeping.

2. (Currently amended) The examination apparatus according to claim 1, wherein the analysis unit analyzes ~~which comprises a unit for determining an electrocardiogram of the subject patient, and an analysis unit for analyzing the enhanced state of sympathetic nerves based on the determined measured~~ electrocardiogram wave form with a heart rate variability analytical procedure.

3. (Currently amended) The examination apparatus according to claim 1 or 2 which ~~comprises a sensor for detecting presence/absence or magnitude of respiratory airflow of the subject patient, and an analysis unit for analyzing synchronization of transition of the respiratory state in a~~ Cheyne-Stokes respiratory symptom in which apnea and respiratory states are repeated with transition of abnormal enhancement of sympathetic nerves.

4. (Currently amended) A therapeutic system which comprises (1) an examination apparatus for use in selecting a patient for whom an oxygen therapy is effective among patients having a sleep respiratory disturbance, and/or use in ascertaining a therapeutic effect of the oxygen therapy, and (2) a supplying apparatus of an oxygen-enriched gas for respiration for the purpose of carrying out the oxygen therapy,

wherein the examination apparatus comprising:

a biological information monitoring system, which has a unit for measuring and recording an airflow information about presence/absence of magnitude of respiratory airflow of the subject patient, and a unit for measuring and recording an electrocardiogram wave form of the subject patient having an electrode part which can be stuck on the skin of the subject patient, wherein the monitoring system is constituted such that the subject patient can move in the state having the monitoring system attached on the body of the subject patient;

an analysis unit for analyzing the enhanced state of sympathetic nerves based on the measured electrocardiogram wave form; and

wherein an output part for displaying or printing both of: (A) a transition of respiratory airflow; and (B) a transition of enhanced state of sympathetic nerves, of the subject patient during sleeping is provided to the examination apparatus.

5. (Original) The therapeutic system according to claim 4 wherein the supplying apparatus of an oxygen-enriched gas for respiration is constituted to allow flow rate of the oxygen-enriched gas for respiration to be regulatable within a predetermined range so that the flow rate becomes the amount prescribed on the basis of the result displayed or printed by the output part of the examination apparatus.

6. (Currently amended) A method of selecting a patient for whom an oxygen therapy is effective among patients having a sleep respiratory disturbance which comprises:

a step of attaching a biological information monitoring system to the subject patient, wherein the monitoring system has a unit for measuring and recording an airflow information about presence/absence or magnitude of respiratory airflow of the subject patient, and a unit for measuring

and recording an electrocardiogram wave form of the subject patient having an electrode part which can be stuck on the skin of the subject patient, and wherein the monitoring system is constituted such that the subject patient can move in the state having the monitoring system attached on the body of the subject patient;

a step of measuring respiratory airflow and electrocardiogram wave form of the subject patient by using the monitoring system;

a step of analyzing the enhanced state of sympathetic nerves based on the measured electrocardiogram wave form; and

determining respiratory airflow and enhanced state of sympathetic nerve of a patient; and a step of selecting a patient who exhibits both results that the determined (A) the measured state of sympathetic nerves is an enhanced state, and (B) the transition of enhanced state of sympathetic nerves is found in conjunction with transition of respiratory airflow.

7. (Currently amended) The method of selecting a patient for whom an oxygen therapy is effective according to claim 6 wherein the ~~step of determining respiratory airflow of the~~ selecting step contains a step of analyzing whether or not the patient detects a Cheyne-Stokes respiratory symptom in which apnea wave form and respiration wave form are repeated.

8. (Currently amended) The method of selecting a patient for whom an oxygen therapy is effective according to claim 7 wherein the selecting step contains a step of analyzing whether or not the enhancement of sympathetic nerve occurs ~~nerve occur~~ in conjunction with occurrence of the respiration wave form in a Cheyne-Stokes respiratory symptom of the patient.

9. (Currently amended) The method of selecting a patient for whom an oxygen therapy is effective according to any one of claims 6 to 8 wherein the analyzing step comprises analyzing the enhanced state of sympathetic nerves ~~comprises determining electrocardiogram wave form of the patient, and the enhanced state of sympathetic nerve is analyzed based on the determined~~ based on the measured electrocardiogram wave form by a heart rate variability analytical procedure.

10. (Currently amended) A method of selecting a patient for whom an oxygen therapy is effective among patients having a sleep respiratory disturbance which comprises:

a step of determining arterial oxygen saturation of a patient;

a step of attaching a biological information monitoring system to the subject patient, wherein the monitoring system has a unit for measuring and recording an airflow information about presence/absence or magnitude of respiratory airflow of the subject patient, and a unit for measuring and recording an electrocardiogram wave form of the subject patient having an electrode part which can be stuck on the skin of the subject patient, and wherein the monitoring system is constituted such that the subject patient can move in the state having the monitoring system attached on the body of the subject patient;

a step of measuring respiratory airflow and electrocardiogram wave form of the subject patient by using the monitoring system;

a step of analyzing the enhanced state of sympathetic nerves based on the measured electrocardiogram wave form; and

a step of determining respiratory airflow and enhanced state of sympathetic nerve of the patient; and selecting a patient who exhibits the results that of

(A) a measured an arterial oxygen-saturation is not higher than a predetermined threshold value,

(B) a measured and the patient is in an enhanced state of sympathetic nerves, and transition of in an enhanced state and

(C) a transition of enhanced state of sympathetic nerves is found in conjunction with a transition of respiratory airflow.

11. (Currently amended) A therapeutic method for sleep respiratory disturbance which comprises:

a step of attaching a biological information monitoring system to the subject patient, wherein the monitoring system has a unit for measuring and recording an airflow information about presence/absence or magnitude of respiratory airflow of the subject patient, and a unit for measuring and recording an electrocardiogram wave form of the subject patient having an electrode part which

can be stuck on the skin of the subject patient, and wherein the monitoring system is constituted such that the subject patient can move while having the monitoring system attached on the body of the subject patient;

a step of measuring respiratory airflow and electrocardiogram wave form of the subject patient by using the monitoring system;

a step of analyzing the enhanced state of sympathetic nerves based on the measured electrocardiogram wave form;

a step of determining respiratory airflow and enhanced state of sympathetic nerve of a patient having a sleep respiratory disturbance; selecting a patient who exhibits exhibiting both results that a of (A) a measured state of sympathetic nerves is in an enhanced state, and (B) a transition of enhanced state of sympathetic nerves is found in conjunction with a transition of respiratory airflow; and

a step of administering oxygen to the selected subject patient.

12. (Currently amended) The therapeutic method for sleep respiratory disturbance according to claim 11 wherein the selecting step contains a step of analyzing whether or not respiratory airflow of the patient exhibits a Cheyne-Stokes respiratory symptom in which apnea wave form and respiration wave form are repeated, and oxygen is administered to a patient in whom occurrence of the enhancement of sympathetic nerve nerves occur is found in conjunction with occurrence of respiration wave form in the a Cheyne-Stokes respiratory symptom of the patient.

13. (Currently amended) A therapeutic method for sleep respiratory disturbance which comprises:

a step of determining arterial oxygen saturation of a the subject patient,

a step of attaching a biological information monitoring system to the subject patient,

wherein the monitoring system has a unit for measuring and recording an airflow information about presence/absence or magnitude of respiratory airflow of the subject patient, and a unit for measuring and recording an electrocardiogram wave form of the subject patient having an electrode part which can be stuck on the skin of the subject patient, and wherein the monitoring

system is constituted such that the subject patient can move while having the monitoring system attached on the body of the subject patient;

a step of measuring respiratory airflow and electrocardiogram wave form of the subject patient by using the monitoring system;

a step of analyzing the enhanced state of sympathetic nerves based on the measured electrocardiogram wave form;

a step of ~~having a sleep respiratory disturbance; determining respiratory airflow and enhanced state of sympathetic nerve of the patient; selecting a patient who exhibits the results that~~
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(A) a measured arterial oxygen saturation ~~is not~~ higher than a predetermined threshold value,

(B) a measured state of sympathetic nerves in an enhanced state, and

(C) a ~~and the patient is in an enhanced state of sympathetic nerve, and transition of enhanced state of sympathetic nerves is found in conjunction with transition of respiratory airflow; and~~

a step of administering oxygen to the selected subject patient.